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ABSTRACT

This document presents results for students in the Wake County Public Schools (WCPSS), North Carolina, on the North Carolina Tests of Computer Skills. In 1991, North Carolina established a computer proficiency requirement for graduation, which is now effective for the class of 2001. Beginning in 1967, eighth graders were to have at least one opportunity to take both of the computer skills tests (multiple choice and performance), with subsequent opportunities during high school as needed. Results reported in this bulletin reflect the status of WCPSS students as of June 2000. Scores are reported by grade level, gender, race/ethnicity, and school. In 1999-2000, passing rates for ninth graders were somewhat lower than those of eighth graders. WCPSS students had a multiple-choice passing rate of 89.4%, a performance passing rate of 89.2%, and an overall passing rate of 86.4%. Approximately 2% of 11th graders had failed to pass the tests by the end of the 1999-2000 school year, and 10% had not yet taken the tests. A slightly higher percentage of females passed the test than males, and passing rates varied by race/ethnicity, with 57.6% of Hispanic students passing the tests and 92.9% of White students passing both tests. A chart presents results by school. (SLD)

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MEASURING UP

December, 2000

E&R Report No. 01.06

1999-00 Computer Skills Tests Results

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Wake County Public Schools

Evaluation and Research Department

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MEASURING UP

WAKE COUNTY PUBLIC SCHOOLS EVALUATION AND RESEARCH DEPARTMENT

1999-00 Computer Skills Tests Results

Author: Doris Tyler (850-1850)

Background

The North Carolina Tests of Computer Skills was originally one test with two components. Under the current guidelines, the state requirement consists of two tests that must be passed separately. In May 1991, the North Carolina State Board of Education, established a computer proficiency requirement for graduation, beginning with the Class of 2000. In October of 1995, the Board modified the requirement by making it effective beginning with the graduating class of 2001. The Board's goal in establishing this requirement is to ensure that: (1) most students enter high school with proficient computer skills, and (2) no student exits North Carolina's high schools without proficient computer skills. The requirement is based on the Computer Skills Curriculum approved in July 1992 by the State Board of Education, as defined in the North Carolina Standard Course of Study. The test was administered for the first time to eighth-grade students in the 1995-1996 school year as a local option.[1]

During the 1996-97 school year, the class of 2001 was in the eighth grade. This was the first year that the NC Tests of Computer Skills were required. Beginning with the eighth grade, students must have at least one opportunity to take both tests, with subsequent opportunities during high school, as needed. This allows students at least five opportunities to satisfy the requirement before completing their senior year in high school. Students may have no more than three opportunities during any school year to take the tests; however, seniors may have one additional opportunity during the last month of the spring semester prior to graduation. In addition, beginning with the eighth grade, a student must be provided focused instructional assistance (remediation) when the student has not demonstrated proficiency.[2]

As with other state tests, testing accommodations are available for students with disabilities or students who are identified under Section 504 of the Rehabilitation Act based on the students' individualized education program or section 504 plan. A limited number of accommodations are also available for students who are limited English proficient (LEP).

In some cases, students with disabilities, when documented by the Individual

[1] NCDPI, *1996-97 Report of Student Performance, North Carolina Tests of Computer Skills*, page 1.

[2] NCDPI, *1996-97 Report of Student Performance, North Carolina Tests of Computer Skills*, page 3.

Education Program Committee may need to demonstrate computer proficiency through the North Carolina Computer Skills Portfolio. The portfolio is available only to students with disabilities who cannot take the test under standard administration conditions, or with the accommodations that are available for that test. When the computer skills portfolio is considered to be at the same standard as the test, then the student has met this graduation requirement.

Although the computer skills curriculum is a kindergarten through grade twelve curriculum, the computer skills test assesses skills that are to be taught in kindergarten through grade eight. The multiple-choice test assesses the nine strands of the July 1992 curriculum: (1) word processing, (2) keyboarding, (3) database use, (4) spreadsheet use, (5) telecomputing skills, (6) societal issues, (7) ethics, (8) terms, operation, and care of computers, and (9) the use of computers in various curricular areas. The performance test assesses four strands of the curriculum: (1) keyboarding techniques, (2) word processing/editing, (3) database use, and (4) spreadsheet use. The state-mandated curriculum for computer skills is revised on a cyclical basis.

The curriculum for the 1999-00 school year is a newly revised curriculum. It was approved by the NC State Board of Education in May, 1998. Although a new computer skills curriculum is currently in place, the test for the 1999-2000 school year was based on the July 1992 curriculum.

A Revised Standard

Beginning with the 2000-01 school year, revised Computer Skills tests (multiple-choice and performance) will measure the revised computer skills curriculum. Students who enter eighth grade during the 2000-01 school year will be subject to the new standard. The computer skills requirement began with students who entered eighth grade during the 1996-97 school year. These students will be subject to the old standard, even if they were retained.[3] Students who entered eighth grade prior to the 1996-97 school year are not subject to the computer skills requirement.

There are six strands in the revised computer skills curriculum. The curriculum strands to be tested on the revised tests are (1) societal issues, (2) databases, (3) spreadsheets, (4) keyboard utilization, word processing, desktop publishing, (5) telecommunications, and (6) multimedia presentation. An NCDPI Assessment Brief is available on the NCDPI website describing the changes in the tests.

The web address is:

http://www.ncdpi.org/accountability/testing/computerskills/

Transition to High School

High schools are meeting the needs of WCPSS students for computer proficiency in a variety of ways. Some schools are providing focused intervention classes, similar to the type of classes provided for students who have not met the reading and mathematics competency requirement. Other schools are advising students to enroll in available computer application classes. All students are advised about all requirements necessary to achieve a North Carolina diploma.

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[3] NCDPI, *NC Tests of Computer skills and Proficiency Graduation Requirements*, February 2000, page 1.

To assist counselors in identifying students who have not met the computer skills requirement, the Testing Office supplies student rosters twice a year. Some counselors have expressed concern that the official transcript does not contain computer skills or competency information. Counselors have expressed some frustration about the number of hours required to identify all students who have not met the requirement and in not having sufficient resources to help all students needing assistance. Another concern is that some students don't want to take computer classes because it means giving up an elective. Our schools are challenged to identify ways to help students meet this requirement with existing resources. For the next few years, they will have an additional challenge of helping students who fall under two different guidelines and tests.

Computer Skills: New ABC Component

Beginning with the 2000-01 school year, the passing rates for the computer skills tests will be part of the ABC Accountability plan. The computer skills testing results at grade 8 will be included in the school's performance composite.

Computer Skills Results

The results reported in this bulletin reflect the status of students as of June 2000. Scores are reported by grade level, gender, race/ethnicity, and school. The report by grade level also includes a row indicated as "blank." This indicates that either (1) the student is new to the Wake County School System and no information is currently available and/or (2) the student has a disability and has been exempted from testing. As with all graduation requirements, exemption from a test does not exempt the student from the graduation requirement.

Results by Grade Level

The figure below summarizes computer skills results by grade level. As noted earlier, the 1999-2000 eleventh-grade students will be the first cohort for which the computer skills tests will be part of the graduation requirements.

Even though ninth-graders had additional time to meet the computer skills requirement, ninth-grade passing rates at the end of the 1999-2000 school year (83.6) were somewhat lower than eighth-graders (84.7). Perhaps each incoming eighth-grade cohort has higher rates than previous cohorts because students are developing computer skills at a younger age.

As of June 2000, WCPSS had a multiple-choice passing rate of 89.4 percent, a performance passing rate of 89.2 percent, and an overall passing rate of 86.4 percent (passed both tests). The number of students meeting the requirement for the district has improved from approximately 82 percent in 1999 to 86 percent in 2000. As shown in Figure 1, approximately 2% of 11th graders had failed to pass the tests by the end of the 1999-2000 school year and 10% had not taken the tests.

Figure 1
Computer Skills by Grade Level

Grade	Number of Students	Multiple-choice			Performance			Passed Both	
		Pass	Fail	Blank	Pass	Fail	Blank	Pass	Blank
8	7040	88.2%	6.3%	5.5%	88.0%	6.2%	5.8%	84.7%	15.3%
9	7306	87.1%	6.1%	6.9%	87.2%	5.5%	7.4%	83.6%	16.4%
10	6025	91.6%	3.3%	5.2%	91.4%	3.0%	5.6%	88.6%	11.4%
11	5297	92.0%	1.8%	6.2%	91.2%	1.9%	6.9%	90.1%	9.9%
WCPSS	**25668**	**89.4%**	**4.6%**	**6.0%**	**89.2%**	**4.3%**	**6.4%**	**86.4%**	**13.6%**

Results by Gender

For both multiple-choice and performance tests, a slightly higher percentage of females passed the tests than males. The percentage of students passing both tests was 84.7 percent for males and 88.2 percent for females.

Figure 2
Computer Skills by Gender

Test	Number of Students	Multiple-choice	Performance	Passed Both
Males	13032	88.0%	87.9%	84.7%
Females	12636	91.0%	90.6%	88.2%
WCPSS	**25668**	**89.4%**	**89.2%**	**86.4%**

Results by Race

Passing rates varied by race/ethnicity. The percentage of students passing both tests ranged from 57.6 percent (Hispanic) to 92.9 percent (White).

Figure 3
Computer Skills by Race

Passed	American Indian	Asian	Black	Hispanic	Multi-Racial	White	**WCPSS**
Number of Students	51	1015	6314	738	192	17358	**25668**
Multiple-choice	84.3%	87.1%	78.7%	61.4%.	87.0%	94.7%	**89.4%**
Performance	86.3%	89.0%	78.8%	64.1%	84.4%	94.2%	**89.2%**
Passed Both	80.4%	85.4%	72.5%	57.6%	78.6%	92.9%	**86.4%**

Figure 4 summarizes results for WCPSS for those students passing both tests by race/ethnicity and gender.

Figure 4
1999-2000 WCPSS Computer Skills by Ethnicity and Gender

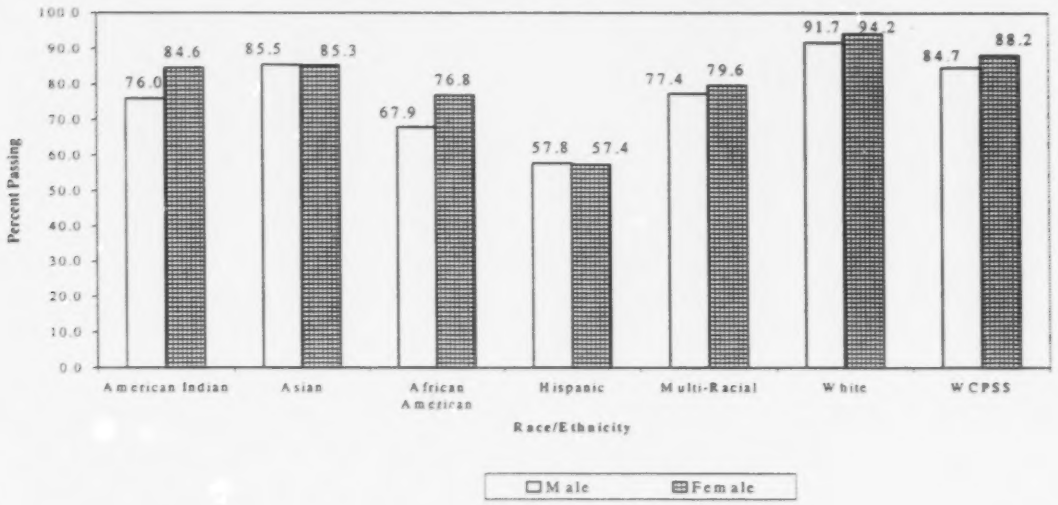
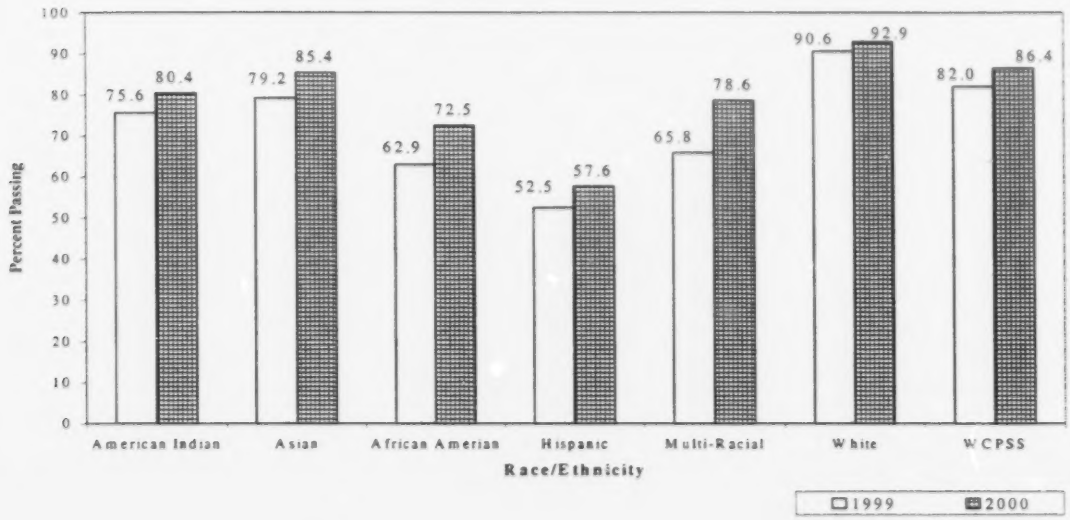


Figure 5 provides summary data by race/ethnicity for the past two school years.

Figure 5
WCPSS Students Who Met the Computer Skills Requirement
School Years 1998-99 and 1999-00



Results by School

Passing rates varied by school. Figures are divided by middle, high, and special schools. Beginning in the 2000-01 school year, the passing rates for the computer skills tests will be part of the ABC plan.

Figure 6
NC Tests of Computer Skills as of June 2000
WCPSS Middle Schools

School Code	School Name	Number of Students Grades 8	Multiple-Choice Passed	Performance Passed	Both Passed
312	Apex Middle	404	90.1%	86.6%	85.6%
356	Carnage Middle	376	81.9%	84.0%	78.2%
360	Carroll Middle	259	88.8%	91.9%	88.8%
370	Centennial Middle	New School 2000-01			
388	Daniels Middle	286	78.7%	81.5%	77.3%
391	Davis Drive Middle	350	90.3%	91.4%	89.1%
394	Dillard Middle	No 8th graders during 1999-00 school year			
399	Durrant Road Middle	458	92.4%	91.7%	88.2%
400	East Cary Middle	422	91.5%	93.4%	89.8%
404	East Garner Middle	235	89.8%	88.1%	83.8%
408	East Millbrook	333	85.9%	84.1%	79.3%
410	East Wake Middle	357	75.6%	71.7%	68.6%
424	Fuquay-Varina Middle	338	89.3%	89.9%	85.8%
471	Leesville Road Middle	421	93.3%	92.9%	91.4%
472	Ligon Middle	331	85.5%	87.6%	81.9%
484	Lufkin Road Middle	No 8th graders during 1999-00 school year			
492	Martin Middle	389	92.8%	91.8%	90.5%
512	North Garner Middle	316	79.1%	77.8%	72.5%
592	Wake Forest-Rolesville Middle	365	93.4%	91.5%	89.3%
594	Wakefield Middle	New School 2000-01 school year			
604	West Cary Middle	388	91.2%	91.2%	89.7%
607	West Lake Middle	448	98.2%	98.7%	97.8%
608	West Millbrook Middle	282	82.6%	82.3%	78.0%
636	Zebulon Middle	238	87.8%	87.0%	83.2%
	WCPSS Grade 8	**7040**	**88.2%**	**88.0%**	**84.7%**

Figure 7
NC Tests of Computer Skills as of June 2000
WCPSS High Schools

School Code	School Name	Number of Students Grades 9-11	Multiple-Choice Passed	Performance Passed	Both Passed
316	Apex High	1464	95.1%	94.7%	92.3%
318	Athens Drive High	1349	90.3%	92.1%	89.4%
348	Broughton High	1149	84.2%	86.2%	80.2%
368	Cary High	1276	88.8%	90.0%	87.3%
411	East Wake High	1246	83.7%	84.3%	79.4%
412	Enloe High	1793	93.1%	93.1%	91.1%
428	Fuquay-Varina High	1106	82.5%	81.5%	79.6%
436	Garner High	1430	88.0%	87.1%	84.3%
441	Green Hope High	796	94.3%	94.5%	93.2%
473	Leesville Road High	1463	94.1%	94.1%	93.2%
500	Millbrook High	1382	91.5%	92.0%	89.1%
552	Sanderson High	1177	89.4%	85.3%	82.8%
562	Southeast Raleigh High	1530	93.3%	91.3%	90.1%
588	Wake Forest-Rolesville High	927	90.7%	91.5%	88.9%
595	Wakefield High	413	91.0%	85.5%	82.6%
	WCPSS Grades 9-11	**18628**	**89.9%**	**89.7%**	**87.1%**

Figure 8
NC Tests of Computer Skills as of June 2000
WCPSS Special Schools

School Code	School Name	Number of Students	Multiple-Choice Passed	Performance Passed	Both Passed
324	Longview School	32	37.5%	37.5%	28.1%
508	Mt. Vernon Redirection	33	54.5%	66.7%	45.5%
528	Mary E. Phillips School	106	56.6%	57.5%	51.9%

Summary

This bulletin reflects the status of students in the WCPSS schools as of June 2000. These results suggest:

- A higher percentage of females passed both tests compared to males.
- There is disparity among racial/ethnic subgroups in passing rates. However, each ethnic group has shown an increase in the percent passing both tests over time.
- Approximately 86 percent of students met this graduation requirement at the end of the 1999-2000 school year.